South Mountain Transportation Corridor Study

Citizens Advisory Team
Technical Report Summary

Draft Traffic Report

Why study traffic in the Environmental Impact Statement (EIS)?

Traffic is studied in the EIS for a number of reasons. First, it can be one of the primary factors used as the basis for development of purpose and need for a transportation improvement and the type of improvement to be suggested. Once it is determined that an improvement is needed and the type of improvement, in the case of this project, a new freeway facility, analysis is made on how that facility would function in the design year, which for this project is 2030. When evaluating the functionality of the proposed freeway, an evaluation is made regarding how it would affect the existing regional freeway system, what type and amount of traffic it would carry and finally, how it would interact with the surrounding arterial street system. The following will discuss these issues as they pertain to the proposed South Mountain Freeway.

Some information about the Purpose and Need

Between 2004 and 2030 the total vehicle miles traveled (vmt) in the entire MAG region are projected to more than double from 93 million to 197 million. The total traffic within the Study Area is projected to increase at roughly the same rate as the entire region. The Regional Transportation Plan (RTP) identified the South Mountain Freeway, as a piece of the overall plan, to help address the current and future congestion in this area. In order to illustrate the need for the South Mountain Freeway, this section will outline the 2030 forecast traffic conditions for the area within the Study Area and the entire MAG region. The analysis will consider the effects on traffic operations with and without the South Mountain Freeway. A number of tools, including volumes, cutlines, level of service (LOS), and travel time will be used to present the impacts.

Growth in the Region

The Phoenix metropolitan area will continue to grow over the next 25 years. The population is expected to double from 3.10 million in 2000 to 6.24 million in 2030. Figure 1 illustrates the socioeconomic growth projected to occur during this time period. Indicated on the graphic is the anticipated increase in residences, homes and jobs within specific geographic areas of the region. As shown, the areas directly serviced by the South Mountain Freeway will account for 55% of the population growth and 58% of the employment growth.

South Mountain Freeway Volumes

In 2030, the forecast traffic on South Mountain Freeway varies along the corridor between 130,000 and 180,000 vehicles per day (vpd). For comparison, the 2003 traffic on US-60 between Rural Road and McClintock Drive was 186,000 vpd and the 2003 traffic on I-17 between I-10 and Van Buren Street was 135,000 vpd. This demonstrates a high demand among motorists for a freeway in this area.

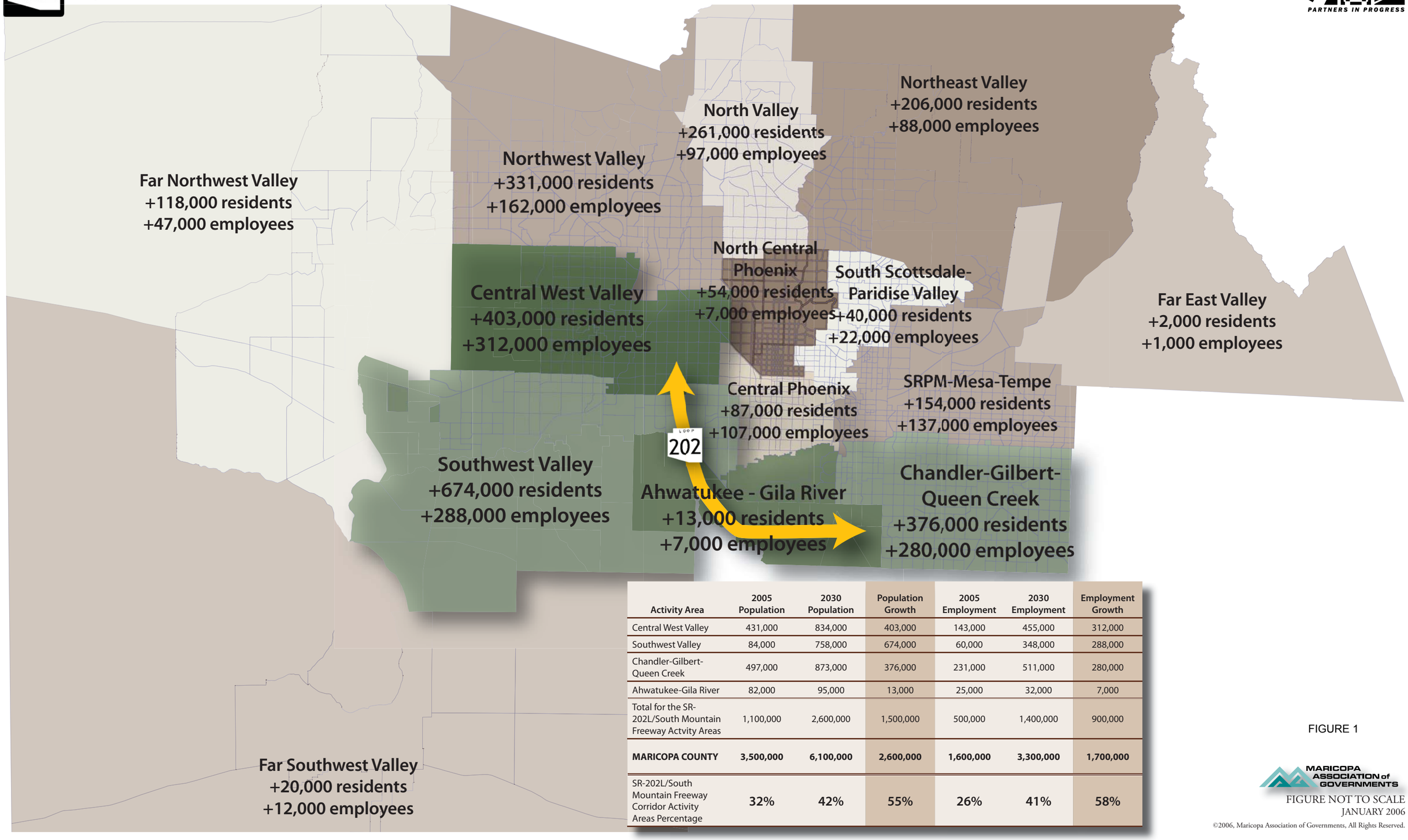
South Mountain Freeway Users

Figure 2 depicts where the users of South Mountain Freeway would be coming from or going to. This data was generated for a segment of the South Mountain Freeway just east of 51st Avenue. Over 75% of the freeway users at this point would be going to or from areas within Mesa, Tempe, Queen Creek, Gila River Indian Community, Chandler, Gilbert, Avondale, Glendale, Surprise, El Mirage, Goodyear, Buckeye, Tolleson, and the Laveen, Estrella, and Ahwatukee Villages of Phoenix.

South Mountain Freeway

2030 POPULATION AND EMPLOYMENT GROWTH IN THE SR-202L/SOUTH MOUNTAIN FREEWAY CORRIDOR

ON THE MOVE
PARTNERS IN PROGRESS



Activity Area	2005 Population	2030 Population	Population Growth	2005 Employment	2030 Employment	Employment Growth
Central West Valley	431,000	834,000	403,000	143,000	455,000	312,000
Southwest Valley	84,000	758,000	674,000	60,000	348,000	288,000
Chandler-Gilbert-Queen Creek	497,000	873,000	376,000	231,000	511,000	280,000
Ahwatukee-Gila River	82,000	95,000	13,000	25,000	32,000	7,000
Total for the SR-202L/South Mountain Freeway Actvity Areas	1,100,000	2,600,000	1,500,000	500,000	1,400,000	900,000
MARICOPA COUNTY	**3,500,000**	**6,100,000**	**2,600,000**	**1,600,000**	**3,300,000**	**1,700,000**
SR-202L/South Mountain Freeway Corridor Activity Areas Percentage	**32%**	**42%**	**55%**	**26%**	**41%**	**58%**

FIGURE 1

MARICOPA ASSOCIATION of GOVERNMENTS

FIGURE NOT TO SCALE
JANUARY 2006

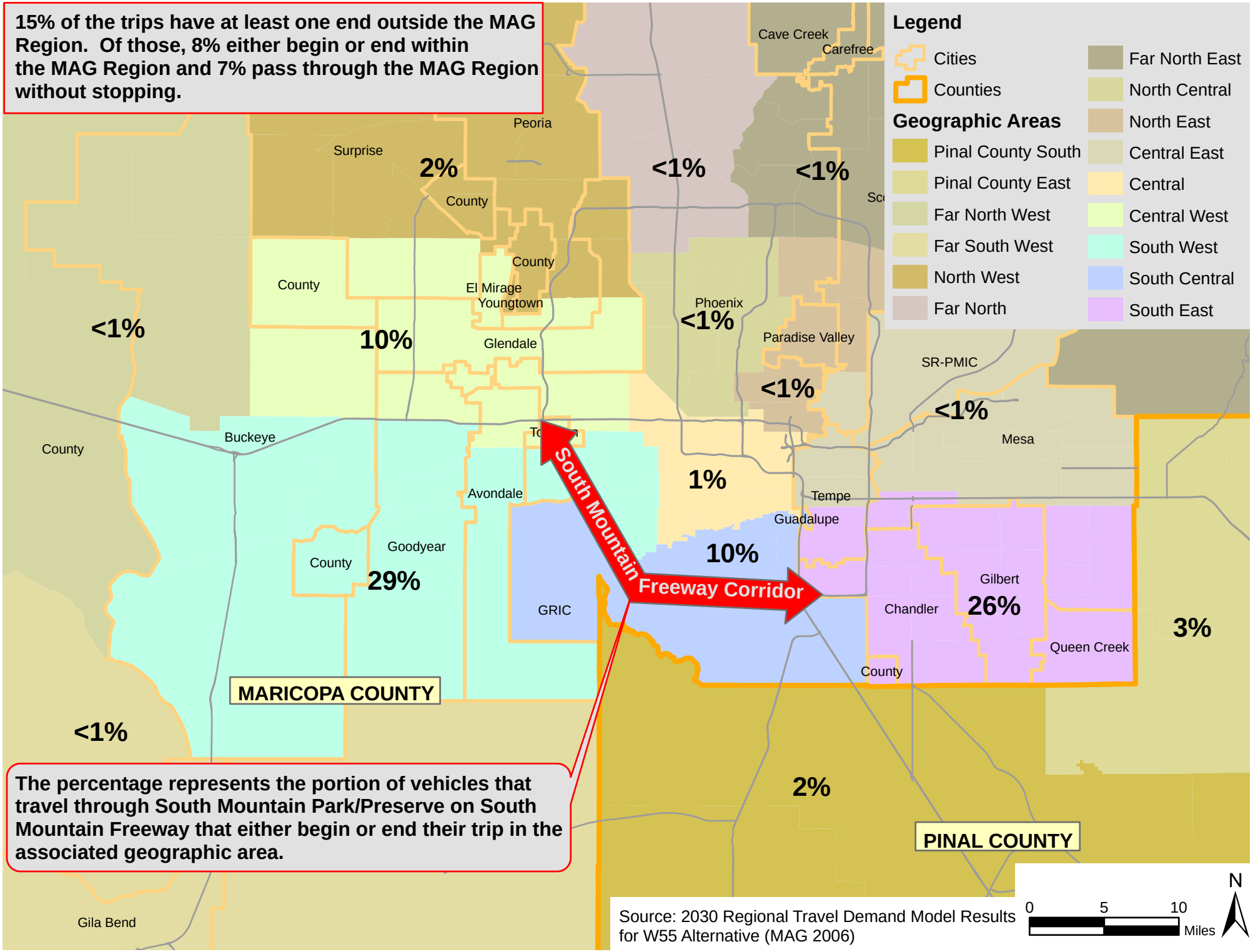

15% of the trips have at least one end outside the MAG Region. Of those, 8% either begin or end within the MAG Region and 7% pass through the MAG Region without stopping.
Legend
Cities
Counties
Geographic Areas
Pinal County South
Pinal County East
Far North West
Far South West
North West
Far North
Far North East
North Central
North East
Central East
Central
Central West
South West
South Central
South East
Cave Creek
Carefree
Peoria
Surprise
2%
County
<1%
<1%
County
El Mirage
Youngtown
County
<1%
10%
Glendale
Phoenix
Paradise Valley
SR-PMIC
<1%
<1%
Buckeye
County
Mesa
1%
Avondale
Tempe
Guadalupe
South Mountain
Freeway Corridor
10%
Goodyear
County
29%
GRIC
Chandler
Gilbert
26%
3%
Queen Creek
County
MARICOPA COUNTY
<1%
2%
PINAL COUNTY
Gila Bend
The percentage represents the portion of vehicles that travel through South Mountain Park/Preserve on South Mountain Freeway that either begin or end their trip in the associated geographic area.
Source: 2030 Regional Travel Demand Model Results for W55 Alternative (MAG 2006)
0
5
10
Miles
N

Figure 2

Regional Freeway Volumes

The traffic projections vary with and without the South Mountain Freeway for freeway segments around the region. Six freeway locations are presented in Table 1 and are also shown in Figure 3. The largest difference in 2030 traffic is on I-10 between 48th Street and Broadway (also known as the Broadway Curve) with a reduction of 65,000 vpd between without South Mountain Freeway and with South Mountain Freeway.

Table 1. Current Versus Projected Traffic Volumes on Selected RFS Segments

Segment	Vehicle Per Day, 2030		
	Without South Mountain Freeway	With South Mountain Freeway	Change
I-10, 83rd Avenue to 75th Avenue	287,000	301,000	+ 5 %
I-10, 48th Street to Broadway Road	412,000	347,000	- 16 %
I-10, 7th Street to 16th Street	287,000	279,000	- 3 %
I-10, Guadalupe Road to Elliot Road	241,000	217,000	- 10 %
I-17, Indian School Road to Camelback Road	260,000	259,000	No Change
SR-101L, Guadalupe Road to Elliot Road	186,000	176,000	- 5 %

Travel Time

The travel time to and from specific locations were calculated using a traffic model that analyzes the volume results from the MAG run EMME/2 model based on the roadway type and LOS. The three trips listed in Table 2 were analyzed during the morning and afternoon peak periods.

LOOP 101 @ CAMELBACK RD
105,000
190,000
201,000
198,000
236,000

I-17 @ INDIAN SCHOOL RD
210,000
255,000
252,000
254,000
251,000

SR 51 @ CAMELBACK RD
129,000
149,000
149,000
146,000
145,000

I-10 @ 83RD AVE
149,000
279,000
307,000
317,000
300,000

I-10 @ 16TH ST
262,000
283,000
278,000
269,000
268,000

I-10 @ BROADWAY RD
236,000
421,000
391,000
394,000
394,000

I-10 @ 107TH AVE
115,000
248,000
247,000
241,000
297,000

I-10 @ 35TH AVE
226,000
297,000
303,000
288,000
287,000

US 60 @ COUNTRY CLUB DR.
231,000
276,000
274,000
275,000
275,000

LOOP 303 @ BUCKEYE RD
0
98,000
104,000
106,000
92,000

SMF @ BUCKEYE RD
0
0
164,000
167,000
199,000

LOOP 101 @ ELLIOT RD
140,000
187,000
179,000
179,000
180,000

I-10R @ EL MIRAGE RD
0
113,000
141,000
135,000
128,000

I-10R @ 91ST AVE
0
99,000
147,000
145,000
122,000

I-10 @ GUADALUPE RD
205,000
242,000
223,000
223,000
223,000

SMF @ 51ST AVE
0
0
161,000
162,000
162,000

SMF @ 24TH ST
0
0
145,000
146,000
146,000

LOOP 202 @ KYRENE RD
0
125,000
180,000
180,000
180,000

I-10 @ RIGGS RD
60,000
92,000
101,000
101,000
101,000

I-10 @ SR 347
63,000
89,000
105,000
106,000
107,000

TRAFFIC PROJECTIONS
Legend

LOCATION
Existing (2003)
No Build (2030)
W55/E1 (2030)
W71/E1 (2030)
W101/E1 (2030)

W55
W71
W101
E1
Arterial Network
County Boundary
GRIC Boundary

DRAFT 02/06

South Mountain Transportation Corridor
TRACS No. 202L MA 054 H5764 01L
FHWA Federal Project No. NH-202-D( )
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Regional Freeway System
2003, 2030 No Action*, And 2030 Action Alternatives Traffic Volumes

Source: 2003 - MAG CERTIFIED TRAFFIC COUNTS
2030 - MAG TRANSPORTATION DEMAND MODEL

*** Full Completion of Regional Transportation Plan Excluding South Mountain Freeway**

Figure 3

Table 2. Travel Times in 2030

2030 Condition	Travel Time (minutes per vehicle)					
	51st Avenue and Elliot Road to I-10 and 7th Avenue		I-10 and Pecos Road to I-10 and Washington Street		I-10 and Pecos Road to I-10 and SR-101L	
	Morning – Laveen to Downton	Afternoon-Downtown to Laveen	Morning-Ahwatukee to Downtown	Afternoon-Downtown to Ahwatukee	Morning-East to West	Afternoon-West to East
With SMF	25.8	28.7	32.2	34.2	40.5	49.9
Without SMF	27.9	33.5	40.7	46.2	50.0	65.9
Time Savings with SMF	2.1	4.8	8.5	12.0	9.5	16.0
% Time Savings with SMF	7.6%	14.4%	20.9%	26.0%	19.0%	24.2%
SMF = South Mountain Freeway						

The travel time savings indicated in Table 2 is per vehicle for specific trips. When travel time savings is evaluated for the region if South Mountain Freeway is built, a monetary savings can be attributed to it. With this approach, if South Mountain Freeway is built, the region would realize a savings of approximately $400 million per year each year after construction is complete.

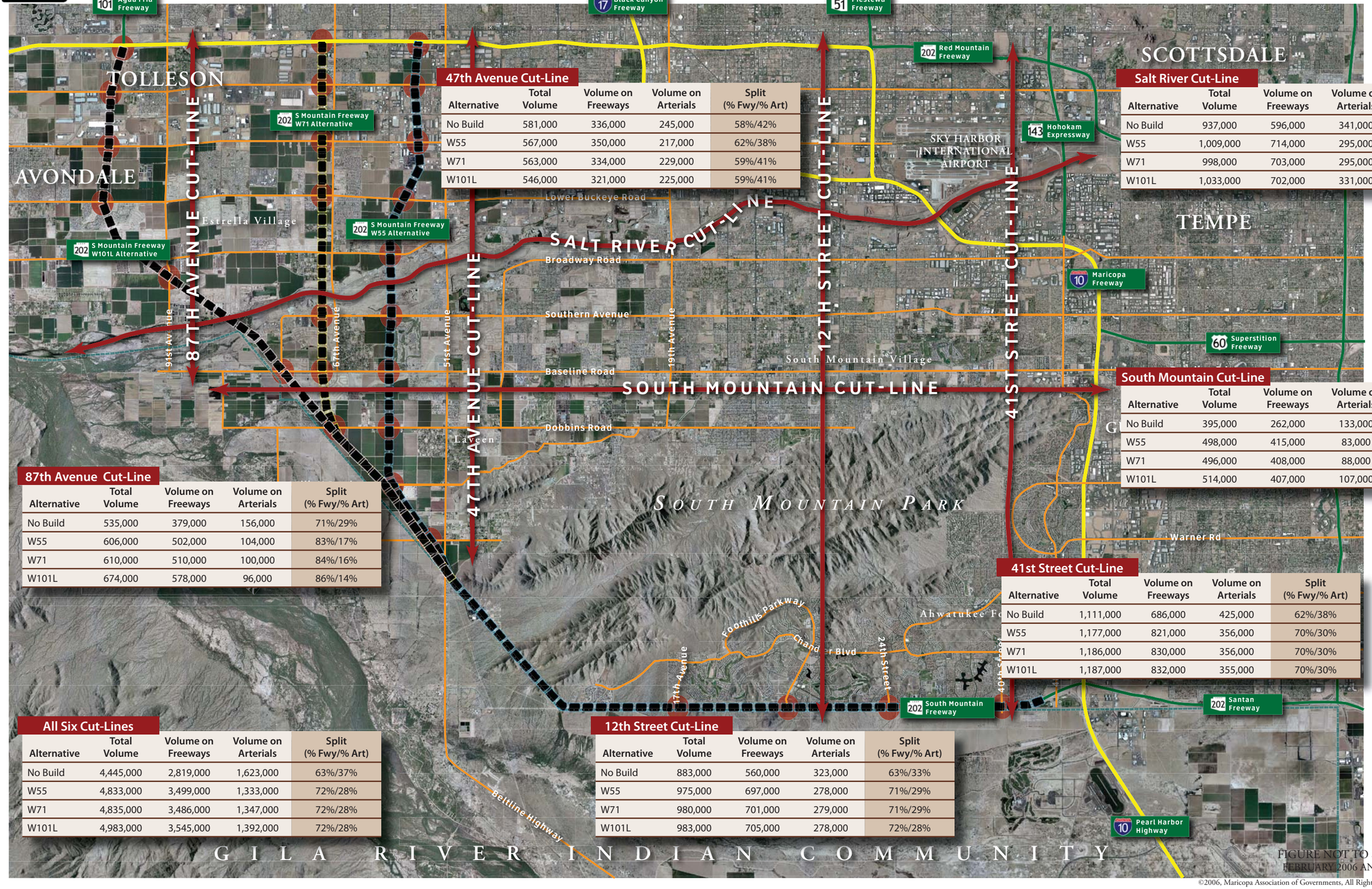
Arterial Street Impacts

A cutline analysis was conducted to help determine the impact of a South Mountain Freeway on the arterial street network. Three cutlines, as shown in Figure 4, were defined as:

Cutline 1: Between 24th Street and 40th Street from Pecos Road to Thomas Road
Cutline 2: Along 47th Avenue from Estrella Drive to Interstate 10/Papago Freeway
Cutline 3: Along the Salt River from 99th Avenue to SR-143/Hohokum Expressway

The results from the cutline analysis are presented in Table 3. In general, there was lower demand for the arterial network with the South Mountain Freeway than without. The percent of the total traffic using arterial streets range from 27 percent to 38 percent and from 34 percent to 43 percent with and without South Mountain Freeway, respectively.

South Mountain Freeway
2030 DAILY TRAVEL DEMAND CUT-LINE ANALYSIS IN THE CORRIDOR STUDY AREA



47th Avenue Cut-Line

Alternative	Total Volume	Volume on Freeways	Volume on Arterials	Split (% Fwy/% Art)
No Build	581,000	336,000	245,000	58%/42%
W55	567,000	350,000	217,000	62%/38%
W71	563,000	334,000	229,000	59%/41%
W101L	546,000	321,000	225,000	59%/41%

Salt River Cut-Line

Alternative	Total Volume	Volume on Freeways	Volume on Arterials	Split (% Fwy/% Art)
No Build	937,000	596,000	341,000	64%/36%
W55	1,009,000	714,000	295,000	71%/29%
W71	998,000	703,000	295,000	70%/30%
W101L	1,033,000	702,000	331,000	68%/32%

South Mountain Cut-Line

Alternative	Total Volume	Volume on Freeways	Volume on Arterials	Split (% Fwy/% Art)
No Build	395,000	262,000	133,000	66%/34%
W55	498,000	415,000	83,000	84%/17%
W71	496,000	408,000	88,000	82%/18%
W101L	514,000	407,000	107,000	79%/21%

87th Avenue Cut-Line

Alternative	Total Volume	Volume on Freeways	Volume on Arterials	Split (% Fwy/% Art)
No Build	535,000	379,000	156,000	71%/29%
W55	606,000	502,000	104,000	83%/17%
W71	610,000	510,000	100,000	84%/16%
W101L	674,000	578,000	96,000	86%/14%

41st Street Cut-Line

Alternative	Total Volume	Volume on Freeways	Volume on Arterials	Split (% Fwy/% Art)
No Build	1,111,000	686,000	425,000	62%/38%
W55	1,177,000	821,000	356,000	70%/30%
W71	1,186,000	830,000	356,000	70%/30%
W101L	1,187,000	832,000	355,000	70%/30%

All Six Cut-Lines

Alternative	Total Volume	Volume on Freeways	Volume on Arterials	Split (% Fwy/% Art)
No Build	4,445,000	2,819,000	1,623,000	63%/37%
W55	4,833,000	3,499,000	1,333,000	72%/28%
W71	4,835,000	3,486,000	1,347,000	72%/28%
W101L	4,983,000	3,545,000	1,392,000	72%/28%

12th Street Cut-Line

Alternative	Total Volume	Volume on Freeways	Volume on Arterials	Split (% Fwy/% Art)
No Build	883,000	560,000	323,000	63%/33%
W55	975,000	697,000	278,000	71%/29%
W71	980,000	701,000	279,000	71%/29%
W101L	983,000	705,000	278,000	72%/28%

Figure 4

FIGURE NOT TO SCALE
FEBRUARY 2006 ANALYSIS

MARICOPA ASSOCIATION of GOVERNMENTS
ON THE MOVE
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Table 3. Cutline Comparison

Cutline *	Total Volume	Volume on Freeways	Volume on Arterials	Split	
				% Freeway	% Arterial
Cutline 1: Along 41st Street from Pecos Road to Red Mountain Freeway					
Without SMF	1,111,000	686,000	425,000	62%	38%
With SMF	1,177,000	821,000	356,000	70%	30%
Cutline 2: Along 47th Avenue from Estrella Drive to Interstate 10/Papago Freeway					
Without SMF	581,000	336,000	245,000	58%	42%
With SMF	567,000	350,000	217,000	62%	38%
Cutline 3: Along the Salt River from 99th Avenue to SR-143/Hohokum Expressway					
Without SMF	937,000	596,000	341,000	64%	36%
With SMF	1,009,000	714,000	295,000	71%	29%

SMF = South Mountain Freeway

* For analysis purposes, With SMF values shown are for the W55 Alternative. There is no statistical difference between the alternatives.

Capacity Deficiency

Using a cutline analysis approach, the capacity deficiency of the roadway network (operating at an acceptable LOS D) with and without South Mountain Freeway was determined. The capacity deficiency was calculated by comparing the total capacity and the total demand (projected 2030 volume) of all of the roadways that cross a cutline. It is important to note, the traffic demand model already assumes a reduction in roadway demand based upon existing and planned improvements to transit, light rail, telecommuting, carpooling, and more.

For this project, a cutline was used that cuts through the South Mountain Study Area from the airport south into Ahwatukee Foothills. This cutline would represent the east/west travel demand experienced within the Study Area. The result is that without a major regional roadway in the Study Area, the RTP planned roadway improvements would accommodate about 71 percent of the demand as projected in 2030. If additional funding becomes available and more improvements can be made to transit, light rail, , telecommuting, carpooling, , and major arterial streets a potential additional 13 percent of the 29 percent deficiency would be accommodated. Therefore, without a major freeway being constructed within the South Mountain Study Area to

provide east-west mobility, 16 percent of the drivers desiring to use the roadway network would be unable to do so. This equates to approximately 10 lanes of freeway needed beyond what has already been planned.

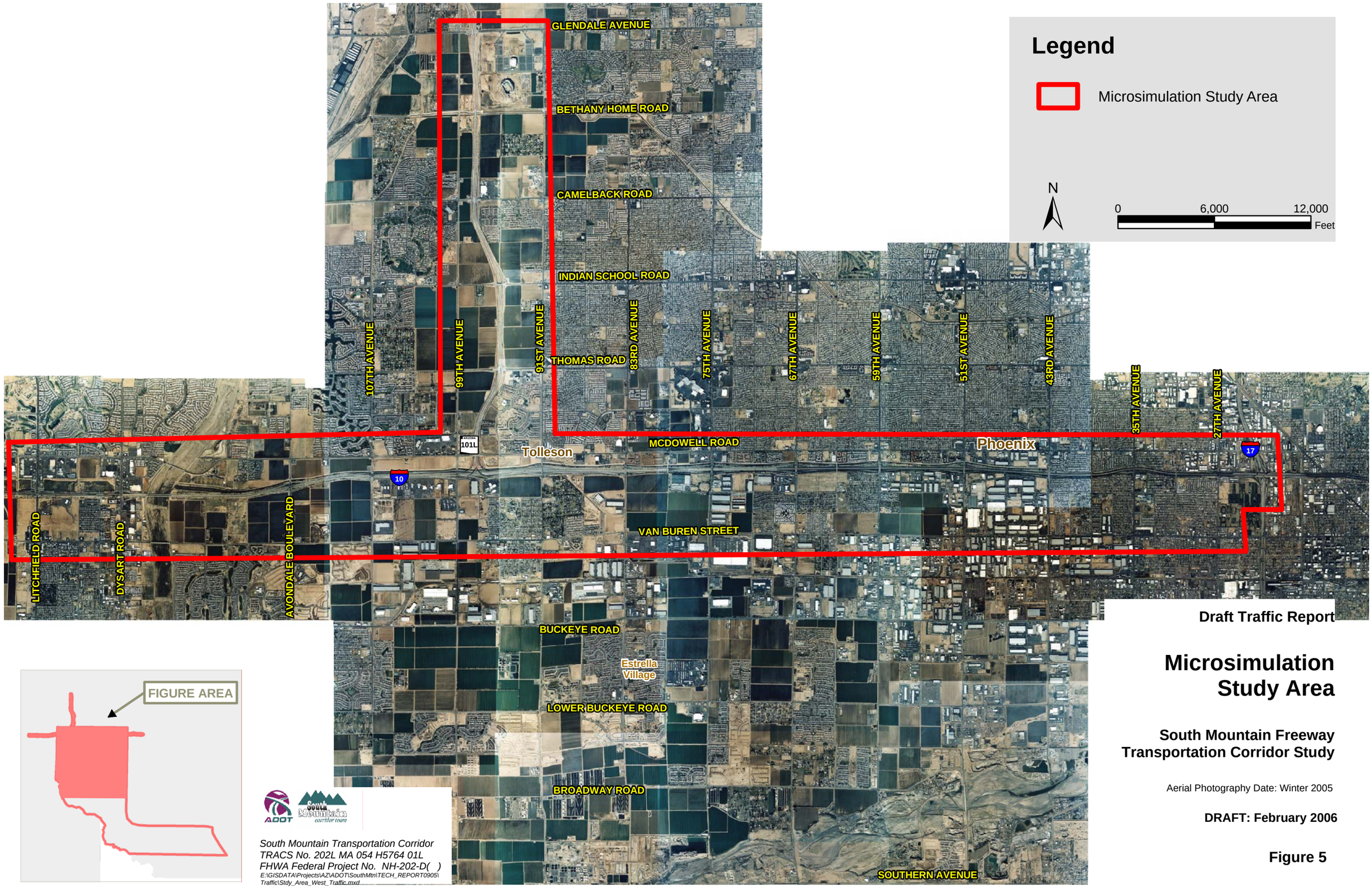
The same capacity deficiency analysis was performed for the cutline with South Mountain Freeway constructed and found that the deficiency in projected capacity was 24 percent in 2030 (as compared to 29 percent). Therefore, South Mountain Freeway is projected to capture five percent of the average daily trips, leaving a remaining capacity deficiency of 11 percent.

Results of Purpose and Need Analysis
As the results of the traffic analyses show, there is a need for South Mountain Freeway for the following reasons:

- Travel within the MAG region is projected to double between 2004 and 2030.
- The majority of metropolitan-area freeways and arterials are projected to operate at LOS E or worse without South Mountain Freeway.
- South Mountain Freeway would reduce projected volumes on the remaining RFS and the local roadway network compared to the RFS and network without South Mountain Freeway.
- Without South Mountain Freeway, the RTP planned facility improvements would accommodate about 71 percent of the total demand (operating at an acceptable LOS D) that is projected in 2030.
- With South Mountain Freeway, the RTP planned facility improvements would accommodate about 76 percent of the total demand (operating at an acceptable LOS D) that is projected in 2030.
- Best-case non-freeway modal transportation improvements, including transit, TDM/TSM, roadway improvements (not including South Mountain Freeway), alone or cumulatively, are not enough to adequately address the projected 2030 capacity deficiencies.
- The length of travel time during peak periods would increase substantially between 2004 and 2030.
- The length of travel time during peak periods would be reduced in 2030 with South Mountain Freeway as compared to 2030 without South Mountain Freeway.

What are the affects on Interstate 10/Papago Freeway for each alternative?

Three locations for a system interchange with I-10 are being considered in the Western Section of the South Mountain Freeway corridor; W55, W71, and W101. Therefore, freeway operations on I-10 are considered a key component in the ultimate location decision. The microsimulation model VISSIM was used to evaluate traffic operations on I-10 and SR-101L/Agua Fria Freeway and the microsimulation model CORSIM was used to evaluate traffic operations on the arterial streets crossing the freeways. The study area for the microsimulation analysis, as shown in Figure 5, is reduced from the project Study Area. The microsimulation study area is along I-10 west of I-17 and SR-101L from I-10 to Camelback Road. Both models are calibrated based upon existing traffic counts and the analysis is completed using year 2030 traffic forecasts. This section presents the results of the operations analyses.



South Mountain Transportation Corridor
TRACS No. 202L MA 054 H5764 01L
FHWA Federal Project No. NH-202-D( )
E:\GISDATA\Projects\AZADOT\SouthMtn\TECH_REPORT0905\Traffic\Stdy_Area_West_Traffic.mxd

Draft Traffic Report

Microsimulation Study Area

South Mountain Freeway Transportation Corridor Study

Aerial Photography Date: Winter 2005

DRAFT: February 2006

Figure 5

Draft Traffic Report

To evaluate the differences among the South Mountain Freeway/I-10 system interchange scenarios, the delay per vehicle and the travel time were evaluated. Delay per vehicle accounts for every vehicle that enters the network, and accounts for all delay experienced while in the system. For this analysis, the system includes approximately 15 miles of I-10 from Litchfield Road to I-17 and five miles of SR-101L from I-10 to Glendale Avenue. This comparison is an excellent measure of effectiveness (MOE) when comparing system wide improvements for multiple alternatives. The travel time comparisons shown are the cumulative travel time for each direction on I-10 and on SR-101L. This was done to take into account that some alternatives have improved travel time on SR-101L, as opposed to just comparing the I-10 travel times. Table 3 compares the delay per vehicle on the freeway network and Table 4 compares the travel time along the freeway mainline for the future (2030) scenarios.

Table 3. Comparison and Ranking of Average Delay Per Vehicle for Future (2030) Alternative Scenarios

Description	A.M. Peak Period			P.M. Peak Period		
	Delay Per Veh (sec)	Ratio to No Action	Rank	Delay Per Veh (sec)	Ratio to No Action	Rank
No Action	214	-	3	799	-	4
W55 Alternative	231	1.08	4	513	0.64	2
W71 Alternative	184	0.86	2	562	0.70	3
W101 Alternative & Options	110	0.51	1	405	0.51	1

Table 4. Comparison and Ranking of Average Total Travel Time[1] for Future (2030) Alternative Scenarios

Description	A.M. Peak Period			P.M. Peak Period		
	Travel Time (min)	Ratio to No Action	Rank	Travel Time (min)	Ratio to No Action	Rank
No Action	52.1	-	3	109.7	-	4
W55 Alternative	55.1	1.06	4	74.7	0.68	2
W71 Alternative	51.5	0.99	2	83.0	0.76	3
W101 Alternative & Options	44.8	0.86	1	74.2	0.68	1

Note:
1. Total travel time includes the time spent traveling along I-10 and SR-101L within the project Study Area in both directions.

In conclusion, when comparing alternatives:

- The W101 Alternative performs better than the W55, W71 and No Action Alternatives in the morning and afternoon peak periods
- The W55, W71 and No Action Alternatives perform nearly the same in the morning peak period, but not as well as the W101 Alternatives

- The W71 Alternative performs better than the No Action Alternative in the afternoon peak period, but not as well as the W55 and W101 alternatives.

How do the alternatives differ in operational-related impacts?

The following section summarizes the year 2030 forecast travel demand and operational performance of the South Mountain Freeway. Traffic counts for 2003 and forecasted 2030 action and No Action Alternatives are presented in Figure 3. The South Mountain Freeway would carry 149,000 vehicles per day (vpd) to 174,000 vpd at Buckeye Road in 2030, about the volume that SR-101L/Price Freeway carries today near Elliot Road.

The basic travel demand description of each action alternative is shown in Tables 5 and 6 for the Western and Eastern Sections, respectively. The average daily traffic (ADT) and number of general purpose lanes between major arterials are provided. The HOV volume is not included in the totals presented. The action alternatives have approximately the same travel demand from Elliot Road in the Western Section to 51st Avenue in the Eastern Section. The higher volumes on the W71 and W101 alternatives east of 51st Avenue correspond to a higher demand (up to 11,000 vpd) to and from the east as compared to the W55 Alternative. The volumes become the same because a higher volume of traffic exit and enter the 51st Avenue interchange for the W71 and W101 alternatives. The differences north of Elliot Road to I-10 in the Western Section are caused by the traffic from SR 801 that enters and exits South Mountain Freeway north and south of Southern Avenue and the number of lanes required to build up for the system interchange with I-10 at the SR-101L interchange. The W101 Alternative would require 14 lanes (seven in each direction) as compared to eight lanes for the W55 and W71 alternatives (four in each direction) and therefore would be able to accommodate more traffic. The three additional lanes in each direction for the W101 Alternative provide for the through movement that is not necessary in the W55 and W71 alternatives.

To analyze the operational performance of the freeway, the afternoon peak hour level of service (LOS) was calculated (within the MAG model) for each segment discussed in Tables 5 and 6 previously. The results of the analysis are presented in Tables 5 and 6. The peak direction in the afternoon is from I-10 in the Western Section to I-10 in the Eastern Section. In general, the minimum desirable LOS is D. If LOS D can't be obtained then LOS E or F is acceptable for a short duration during the peak period of traffic. There are four segments with LOS E and F for the W55 Alternative and three segments with LOS E and F for the W71 and W101 alternatives. The results for the duration of LOS E and F are presented in Tables 5 and 6. For each of these segments, the duration the freeway experiences LOS E and F is less than one hour. Overall, in the Western Section, the W101 Alternative has the best LOS followed by the W71 Alternative and the W55 Alternative has the worst overall LOS. In the Eastern Section, the action alternatives have the same LOS for each section of freeway.

Table 5. Western Section: ADT (2030), Number of General Purpose Lanes, PM Peak Hour LOS (2030), Duration LOS E and F (2030)

Alternatives	Western Section Location		I-10 to Van Buren Street	Van Buren Street to Buckeye Road	Buckeye Road to Lower Buckeye Road	Lower Buckeye Road to Broadway Road	Broadway Road to Southern Avenue	Southern Avenue to Baseline Road	Baseline Road to Dobbins Road	Dobbins Road to Elliot Road	Elliot Road to Common Point*
	W55/E1	ADT	127,000	149,000	136,000	132,000	147,000	182,000	172,000	152,000	143,000
		Lanes	8	8	8	8	8	8	8	8	8
		PM Peak LOS	C	D	D	D	D	E/F	E/F	D	D
		Duration LOS E/F (hours)	0	0	0	0	0	< 1	< 1	0	0
	W71/E1	ADT	125,000	152,000	142,000	134,000	135,000	178,000	165,000	145,000	146,000
		Lanes	8	8	8	8	8	8	8	8	8
		PM Peak LOS	C	D	D	D	D	E/F	D	D	D
		Duration LOS E/F (hours)	0	0	0	0	0	< 1	0	0	0
	W101/E1	ADT	164,000	174,000	154,000	136,000	139,000	185,000	164,000	142,000	143,000
		Lanes	14	14	12	10	8	8	8	8	8
		PM Peak LOS	B	C	C	C	C	E/F	D	D	D
		Duration LOS E/F (hours)	0	0	0	0	0	< 1	0	0	0

Table 6. Eastern Section: ADT (2030), Number of General Purpose Lanes, PM Peak Hour LOS (2030), Duration LOS E and F (2030)

Alternatives	Eastern Section Location		Common Point* to Estrella Drive	Estrella Drive to 51st Avenue	51st Avenue to 25th Avenue	25th Avenue to 17th Avenue	17th Avenue to Desert Foothills Parkway	Desert Foothills Parkway to	24th Street to 32nd Street	32nd Street to 40th Street	40th Street to I-10
	W55/E1	ADT	143,000	143,000	160,000	159,000	158,000	153,000	157,000	160,000	173,000
		Lanes	8	8	8	8	8	8	8	8	10
		PM Peak LOS	D	D	E/F	E/F	D	D	D	D	D
		Duration LOS E/F (hours)	0	0	< 1	< 1	0	0	0	0	0
	W71/E1	ADT	146,000	146,000	167,000	166,000	165,000	160,000	164,000	167,000	180,000
		Lanes	8	8	8	8	8	8	8	8	10
		PM Peak LOS	D	D	E/F	E/F	D	D	D	D	D
		Duration LOS E/F (hours)	0	0	< 1	< 1	0	0	0	0	0
	W101/E1	ADT	143,000	143,000	170,000	168,000	168,000	163,000	167,000	169,000	184,000
		Lanes	8	8	8	8	8	8	8	8	10
		PM Peak LOS	D	D	E/F	E/F	D	D	D	D	D
		Duration LOS E/F (hours)	0	0	< 1	< 1	0	0	0	0	0

What kinds of freeway operational impacts (post-construction) would occur?

While the proposed South Mountain Freeway would function as a continuation of the freeway loop system around downtown Phoenix, the South Mountain Freeway is not intended as a truck bypass. ADOT has an existing truck bypass of downtown Phoenix that utilizes SR-85 and Interstate 8 (I-8). The existing truck bypass begins along I-10 approximately 32 miles west of downtown Phoenix, follows SR 85 for approximately 33 miles south and then connects to I-8. The truck bypass then follows I-8 approximately 63 miles east before reconnecting with I-10 approximately 56 miles south of downtown Phoenix. SR-85 is currently being reconstructed as a four-lane divided highway with limited access control. I-8 is a four-lane divided Interstate with full access control.

The MAG regional travel demand model forecasts approximately 10% truck traffic on the South Mountain Freeway in 2030. The forecast truck traffic is based on existing traffic studies and projected socioeconomic data. This percentage is similar to the current conditions on I-10 between SR-101L/Agua Fria Freeway and I-17 and on US-60.

What if the project was not constructed?

Throughout this summary, data has been provided indicating the effects of not building the South Mountain Freeway. In short:

- increased traffic on the regional freeway system
- decreased level of service on the regional freeway system
- increased travel times on the regional freeway system
- increased traffic on the arterial street network
- increased travel times on the arterial street network

What can be done to reduce construction impacts?

Concurrent with the Draft EIS, an implementation plan will be developed. This plan will identify a method for staging of construction. The intent of this staging is to build segments of the freeway while limiting impact to the surrounding street network. In the Western Section of the Study Area, this is facilitated by the one mile arterial street grid which allows temporary closures of existing roadways as the freeway is constructed. Traffic from the closed roadway can be rerouted to the next adjacent arterial street. In the Eastern Section of the Study Area, the E1 Alternative is coincident with Pecos Road, an existing arterial street. As such, during development of the Implementation Plan, an evaluation will need to be done to determine the appropriateness of rerouting traffic onto existing arterials north of Pecos Road or constructing temporary roadways to maintain the functionality of Pecos Road but located outside the ultimate freeway footprint.

Are the conclusions presented in this summary final?

It is quite likely that quantitative findings relative to impacts are subject to change. The reasons for future changes which will be presented to the public during the Draft EIS, Final EIS and Final Design stages are based on the following:

- Refinement in design features through the design process.

- On-going communications with Gila River Indian Community in regards to granting permission to study action alternatives on GRIC lands.
- Potential updates to traffic forecasts as updated regularly by MAG.
- Potential updates with regards to the special 2005 survey to augment the 2000 Census.

However, even with these factors affecting findings, it is anticipated the effects would be relatively the same among the alternatives and consequently impacts would be comparatively the same. This assumption would be confirmed if and when such changes were to occur.

As a member of the Citizens Advisory Team, how can you review the entire technical report?

The complete technical report is available for review by making an appointment with Mike Bruder or Ralph Ellis at 602-712-7545.